

REPORT ON BOILERS.

No 1361

- 2 JUL 1943

Date of report 16th June 1943
 No. 10
 Reg. No. 104
 Name of vessel SINGLE SC. 1/2 RUDOLF
 Date, First Survey 1st March 1943
 Last Survey 2nd March 1943
 Number of visits 2
 Tons Gross 168.52
 Net 108.27
 Master
 Built at
 By whom built
 Yard No.
 When built
 Engines made at
 By whom made
 Engine No.
 When made
 Boilers made at
 By whom made
 Boiler No.
 When made
 Nominal Horse Power 194
 Owners
 Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Jegerfors Järnverks A.B. & Avesta Järnverks A.B. (Letter for Record 5)
 Total Heating Surface of Boilers $2 \times 110 \text{ m}^2 = 220 \text{ m}^2 = 2368 \text{ ft}^2$ Is forced draught fitted Yes Coal or Oil fired Coal
 No. and Description of Boilers Two horizontal multitubular boilers Working Pressure 220 lbs/sq. in. = 15.5 kg/cm²
 Tested by hydraulic pressure to 380 lbs/sq. in. Date of test 1/4/42 No. of Certificate 3765377 Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler 285 sq. ft. No. and Description of safety valves to each boiler Double spring loaded
 Area of each set of valves per boiler (per Rule 3940 sq. in. 4055 sq. in. as fitted 4920 sq. in.) Pressure to which they are adjusted 220 lbs/sq. in. Are they fitted with easing gear Yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No donkey boilers
 Smallest distance between boilers or uptakes and bunkers or woodwork 850 mm Is oil fuel carried in the double bottom under boilers No
 Smallest distance between shell of boiler and tank top plating 500 mm Is the bottom of the boiler insulated Yes
 Largest internal dia. of boilers 3344 mm Length 3300 mm Shell plates: Material L.M. Steel Tensile strength 42.4-48.0 kg/mm²
 Thickness 38 mm Are the shell plates welded or flanged Welded Description of riveting: circ. seams Electric welding
 long. seams Electric welding Diameter of rivet holes in (circ. seams — long. seams — Pitch of rivets —
 Percentage of strength of circ. end seams 85% Percentage of strength of circ. intermediate seam 85%
 Percentage of strength of longitudinal joint 85% Working pressure of shell by Rules 16.5 kg/cm²
 Thickness of butt straps (outer — inner —) No. and Description of Furnaces in each Boiler 2 Division
 Material L.M. Steel Tensile strength 44-45 kg/mm² Smallest outside diameter 980 mm
 Length of plain part (top — bottom —) Thickness of plates (crown 15 mm bottom —) Description of longitudinal joint Electric welding
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 15.65 kg/cm²
 End plates in steam space: Material L.M. Steel Tensile strength 42.4-48.0 kg/mm² Thickness 35 mm Pitch of stays 410x370 mm
 How are stays secured Double nuts and outside washers Working pressure by Rules 16.05 kg/cm²
 Tube plates: Material (front L.M. Steel back L.M. Steel) Tensile strength 41-47 kg/mm² Thickness 25 mm
 Mean pitch of stay tubes in nests 259 mm Pitch across wide water spaces 380 mm Working pressure (front 15.73 kg/cm² back 18.4 kg/cm²)
 Girders to combustion chamber tops: Material L.M. Steel Tensile strength 44.53 kg/mm² Depth and thickness of girders
 at centre 100x25 mm Length as per Rule 648 mm Distance apart 210 mm No. and pitch of stays
 in each Electric welding Working pressure by Rules 15.75 kg/cm² Combustion chamber plates: Material L.M. Steel
 Tensile strength 42.7-46.7 kg/mm² Thickness: Sides 18 mm Back 18 mm Top 18 mm Bottom 19.5 mm
 Pitch of stays ditto: Sides 200x160 mm Back 170x170 mm Top — Are stays fitted with nuts or riveted over riveted over
 Working pressure by Rules 16.2 kg/cm² Front plate at bottom: Material L.M. Steel Tensile strength 42.7-46.7 kg/mm²
 Thickness 25 mm Lower back plate: Material L.M. Steel Tensile strength 42.7-46.7 kg/mm² Thickness 25 mm
 Pitch of stays at wide water space 380x170 mm Are stays fitted with nuts or riveted over Fitted with nuts
 Working Pressure 21 kg/cm² Main stays: Material L.M. Steel Tensile strength 44.55 kg/mm²
 Diameter 76 mm No. of threads per inch 6 Area supported by each stay 370x410 mm
 Working pressure by Rule 20.1 kg/cm² Screw stays: L.M. Steel Tensile strength 41-47 kg/mm²
 Diameter 34.5 mm No. of threads per inch 9
 Working pressure by Rule 38 kg/cm²



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40-3 my hr.

45^m hr. ✓
17.3 kg/cm²
9

The foregoing is a correct description.

Are the approved plans of boiler and superheater forwarded herewith

Total No. of visits 33.

GENERAL REMARKS (State quality of workmanship, opinions as to class, etc.) These boilers have been built under Special License in accordance with the approved plan and the Rules for Welded Pressure Vessels class 2 and have been fitted on board under our inspection and to our satisfaction. The workmanship is good. All welded parts of the boilers have been stress-relieved in accordance with the Rules. Test sheets for the material of the boilers and superheaters will be forwarded when postal communications permit. Chalmers certificate of routine tests of welding carried out in our presence and plans showing position and number of X-ray films on which is indicated the category in which each film was placed by Tekniska Röntgencentralen are attached. Five representative X-ray films are forwarded herewith. Please see 3rd paragraph of our letter of the 10th November 1941 re Lindholmens Nos 973, 487. See also Secretary's letter initialled "E" of the 10th Dec. 1941, re Lindholmens 973, 487. Macro tests have been carried out at the works of Messrs. A.-B. Lindholm with satisfactory results. The boilers have been marked

Nos 376/7
 LLOYD'S TEST 380 LBS.
 WP 220 LBS

(Lgd) G. Anander L. J. Johansson

THES. 20 JUL 1943

see minute on
I.B. Rpt.

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